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VIII. Letter from Dr. HERAPATH to Professor STOKES, "On the Compounds of Iodine and Strychnine." Communicated by Professor STOKES, Sec. R.S. Received June 21, 1855.

June 20, 1855.

MY DEAR SIR,—Will you do me the favour to announce to the Royal Society, that I have been engaged, during some months past, in investigating the optical and chemical properties of some crystalline compounds of iodine and strychnine which appear to be strongly indicative and peculiar? One of these bodies, from the analysis hitherto made, would seem to have a formula not very different from the following, viz. $C^{42}H^{22}N^2O^4 + I^3$, and crystallizes in hexagonal prisms, passing by the ordinary replacement planes to the acute rhombohedron and other forms, all apparently derived from the rhombohedral system; some of these crystalline forms are very strange and unusual. This substance possesses "double absorption" in a very evident degree, and when examined by vertically plane polarized light, the hexahedral prisms are all obstructive of the polarized beam when the length of the prisms lies parallel to the plane of the incident ray; in this position they appear dark sienna-brown in colour; when the long axis of the prisms lies perpendicular to the plane of primitive polarization the crystals transmit a lemon-yellow tint, passing through greenish yellow to sherry-brown.

The other substance appears to be the sulphate of iodo-strychnia, and has a decidedly metallic green reflexion, crystallizes in stellate aggregations of prisms, brilliantly green by reflected light, but having a deep blood-colour by transmission; these also possess double absorption and are very peculiar, as a slight increase in thickness renders them wholly impervious to light.

When these matters have been more carefully worked out, I hope to have the pleasure of communicating the results to the Society: in the mean time the present notice will be sufficient for the object in view.

I remain, my dear Sir,

Yours very truly,

W. BIRD HERAPATH.

Professor Stokes, F.R.S.